Delta RMP Steering Committee Meeting

March 4, 2014

9:00 – 11:30 AM

Call-In Number: 1-877-951-5169 (Access Code: 949 281 0)

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Draft Agenda

1.	**Introductions** Establish quorum		**9:00** **Brock Bernstein**
2.	**Announcements from Committee Members**		**9:05** **Group**
3.	**Approve Agenda and Summary (Attachment)** Agree on agenda and approve summary of prior meeting	Draft Summary 2014 Jan14.doc	**9:10** **Brock Bernstein**
4.	**Decision: Approval of Edits to Assessment Questions** Two minor changes are pending approval: 1. Preamble to Current Use Pesticides/Toxicity: SC acknowledgment that "some pesticides are causing toxicity" rather than "pesticides are causing significant toxicity". 2. Nutrient Question: "What are the loads from tributaries to the Delta?" Deleted definition of tributaries (formerly: upstream of legal Delta boundary), which can be decided by TAC at some point. <u>Desired outcome:</u> - Approval of edits to assessment questions	assessment questions - revised.d	**9:15** **Thomas Jabusch**

5.	**Update: TAC meeting and next steps** The TAC co-Chairs will provide an update on the outcomes from the 1st TAC meeting and advise on next steps, challenges, and recommendations for resolving them.	 Draft Summary 2014 Feb5 TAC.doc	**9:30** **Stephen McCord** **Joe Domagalski**
7.	**Updates** 1. Regional background characterization		**10:00** **Linda Dorn**
6.	**Action: Delta RMP development schedule** We will revisit and review the process timeline in relation to progress by the TAC, permit negotiations, IEP budget cycle, and the existing ASC contract. <u>Desired outcome:</u> - Agree on a general timeline for critical decisions and implementation.	 RMP tasks and timeline.doc  Potential IEP RMP Interaction.doc	**10:15** **Meghan Sullivan** **Brock Bernstein** **Thomas Jabusch**
7.	**Plus/Delta, set dates and agenda topics for upcoming meetings**		**11:15** **Brock Bernstein**
10.	**Adjourn**		**11:30**

Delta RMP Steering Committee Meeting

January 14, 2014

9:00 AM – 12:00 PM

Sacramento Regional County Sanitation District Building

Sunset Maple Room

10060 Goethe Road, Sacramento, CA 95827

Draft Summary

Attendees:

Voting Steering Committee (and/or Alternate) members present[1]*:*

Kenneth Landau, Regulatory – State (Central Valley Water Board)

Mike Wackman, Agriculture (San Joaquin County and Delta Water Quality Coalition)

Casey Wichert, POTWs (City of Brentwood)

Dave Tamayo, Stormwater, Phase I Communities (Sacramento Stormwater Quality Partnership)

Tim Vendlinski, Regulatory – Federal (USEPA)

Linda Dorn, POTWs (SRCSD)

Stephanie Fong, Alternate–Water Supply (SFCWA)

Erich Delmas, POTWs (City of Tracy)

By phone:

Stephanie Reyna-Hiestand, Stormwater, Phase II Communities (City of Tracy)

Others present:

Brock Bernstein, Facilitator

Thomas Jabusch, SFEI-ASC

Brian Laurenson, LWA/Sacramento Stormwater Quality Partnership

Meghan Sullivan, Central Valley Water Board

[1] *Name, Representation (Affiliation)*

Joe Domagalski, USGS

Patrick Morris, Central Valley Water Board

Jay Davis, SFEI-ASC

Dalia Fadl, City of Sacramento

Vyomini Upadhyay, SRCSD

Stephen Clark, Pacific EcoRisk

Jason Lofton, SRCSD

Rachel Kubiak, Western Plant Health Association

Tessa Fojut, Central Valley Water Board

Tom Grovhoug, LWA

Tony Pirondini, City of Vacaville

Karen Ashby, LWA/Stockton

Claus Suverkropp, LWA/SVWQC/SJDWQC

Tony Hale, SFEI-ASC

Stephen McCord, MEI

On phone:

Mike Mosley (Reclamation)

Debbie Webster, CVCWA

1.	**Introductions** A quorum was established.
2.	**Announcements from Committee Members** Jay Davis announced that Jim Kelly, former General Manager of the Contra Costa Sanitation District, has assumed the role of Interim Executive Director at SFEI-ASC.
3.	**Approve Agenda and Summary** Agenda and Dec 2 summary were approved.
4.	**Decision: Assessment Questions** Prior to the meeting, Linda Dorn had distributed a revised version of the

	assessment questions that had been edited collaboratively by participating permittees. Discussion participants agreed that the edited version of the assessment questions provided a number of improvements, including a better structure that shows more clearly how the assessment questions relate to the broader management questions of the Delta RMP SC. The discussion focused on editing and finalizing the revised assessment questions. Brock Bernstein reminded the group that there are other existing monitoring and research efforts that the Delta RMP could benefit from and amend and thus the final list of questions needn't be all-encompassing and comprehensive. A vibrant discussion of the toxicity questions arrived at the common denominator that the use of toxicity testing would be beneficial for narrowing down a list of potential chemicals that may cause water quality impacts. However, there were disagreements over the range of potential chemicals that should be considered. Tim Vendlinski suggested that the SC could make decisions in real-time about a reasonable scope for follow-up analyses as the assessment proceeds and initial results are being reported. Linda Dorn noted a preamble to be written by Dave Tamayo would be helpful to focus the assessment questions. She reiterated that she would not want to lose the possibility of impacts from other contaminant classes in the language while focusing it more specifically on pesticides. She also emphasized the need for cost estimates for monitoring plans to address the assessment questions, with estimates for Status & Trends questions as the highest priority. <u>Outcomes:</u> - The assessment questions will be edited and finalized based on the edits and guidance provided during the discussion. - The primary focus of the toxicity assessment questions will be on pesticides. The initial screening mechanism will be to identify those current use pesticides that are most likely causing problems. The SC will be deciding on specific tests and an assessment approach based on the prioritized list. The TAC will then be tasked with developing a monitoring and study plan.
5.	**Decision: Outline of TAC Charter** The roles and responsibilities of the TAC as described in the Delta RMP Committee Roles document were reviewed, discussed, end edited. The revised guiding principles and committee roles were approved pending the inclusion of the discussed edits.

6.	**Decision: Charge to TAC** The charge to the TAC was approved with minor revisions. One point of discussion was the proposed inclusion of a funding plan in the work plan. It was clarified that what is needed is a budget plan and a discussion of opportunities for finding funding. Ken Landau suggested that the timing of funding should also be discussed. Linda Dorn suggested that the budget should include an estimate for a quality assurance project plan (QAPP), data management, etc. Stephanie Fong noted that from a state board perspective, the monitoring plan needs some language that data goes into CEDEN. Discussion participants agreed that the budget plan should include an estimate for how much money to set aside for reporting and analysis as well as a ballpark amount for data management. Jay Davis suggested that staff could provide an estimate based on SFEI's cost, as a starting point. The cost estimate could then be compared to other options, if some of the partners were to use other their own or additional capacities (e.g. Central Valley RDC), and evaluate potential cost savings. Brock Bernstein advised the TAC co-chairs to talk to other monitoring groups and exploit their work when developing the Delta RMP monitoring design.
7.	**Updates** 1. *TAC co-chair funding:* Dave Tamayo announced that his Board approved funding of a $15,000 contract for Stephen McCord. Ken Landau added that he has crafted some language to acknowledge this support as a contribution to the RMP. 2. *Regional background characterization:* Linda Dorn provided an update on continuing efforts by POTWs and Regional Board staff in identifying a proposed network of stations that would meet ambient characterization needs for regulatory purposes. Discussions are continuing between Board staff and permittees in an effort to work out remaining "kinks". The main challenge is that permit implications are different for each discharger.
8.	**Information** 1. *Delta Regional Data Center Proposal:* Shakoora Azimi-Gaylon from the Delta Conservancy informed the SC that her agency has partnered with ASC and submitted a proposal to the USEPA National Environmental Information Exchange Network (NEIEN). The requested amount is $300,000 with $50,000 in matching funds. The proposal supports CEDEN and has three parts: 1) collecting data, 2) QAQC, and 3) public meetings. The proposal would not result in a new Data Center. Funding would not be enough to sustain a Data Center and the

	focus would be on existing data that are not currently captured by CEDEN and providing a roadmap for data coordination in the Delta. The main objective of the proposal would be to assemble existing data, which would focus the project to work with existing RDCs and data providers in the Delta, in order to move Delta data into CEDEN. Tony Hale added that the project would be applying the same RDC services that are available in other regions to underserved Delta data providers. The prioritization of datasets would be based on careful consideration of the significance of historic data sources related to work effort involved. 2. *Estuary Portal:* Stephanie Fong provided an overview of the Estuary Portal pages on the California Water Quality Web Portal. The website is based on the OpenNRM development framework, which allows common use and sharing of online tools and data among users. She noted that this capability is very important to the California Estuary Monitoring Workgroup (CEMW), since it allows the comparison of data lines within a graph and tracking of deviations in the underlying data, thus flattening the discussion over data and their uses. Meeting participants pointed to the need for coordination between the Delta RMP and the CEMW. Stephanie pointed out that Meghan Sullivan currently represents the Delta RMP in the group. She also emphasized that the CEMW is open to all stakeholders, calling out SRCSD and the Bay Institute as examples. Meghan commented that once the RMP would get started, it would be on the Steering Committee to coordinate with the CEMW.
8.	**Next meeting** The next meeting will be on March 4, 2014 (9am-12pm) at the Sacramento Regional County Sanitation District.
8.	**Action items:** 7.1. Staff, with input from the TAC, will further clean up the language of the assessment questions (e.g. trying to clarify language for some MeHg questions for someone to understand without history of MeHg TMDL), clarify remaining ambiguities, and redistribute the questions (due: Feb 18). 7.2. Dave Tamayo and Stephanie Fong to draft a preamble to the toxicity assessment questions explaining the use of toxicity testing as a tool rather than a constituent (due: Jan 22). 7.3. Dave Tamayo to draft additional nutrient health bullets (due: Jan 22).

	7.4. Shakoora Azimi-Gaylon to send proposal language to Delta RMP SC (due: Feb 18).

Delta RMP Draft Assessment Questions (01/15/14)

These draft assessment questions build on the information sheets for each candidate constituent category as well as subsequent discussion in Steering Committee meetings and with individual Steering Committee members. The purpose for these assessment questions is to guide the monitoring design, which will answer these questions.

TAC tasks for this document:

- Review & recommend edits
- Identify questions which can already largely be answered, answer those, and reference
- Identify specific information and/or data products needed to answer the management questions
- Prioritize by sequence (esp. what to start to answer in year 1) and importance

Mercury

Status and Trends: Is there a problem or are there signs of a problem?

- What are the status and trends in ambient concentrations of methylmercury in water and in fish, particularly in areas likely to be affected by major sources or new sources (e.g., large-scale restoration projects)?
  - Are trends similar or different across different subregions of the Delta?
  - How are methylmercury concentrations in Delta subareas affected by existing sources, activities, and events?

Are there important data gaps associated with particular water bodies or Delta subareas?

Sources, Pathways, Loadings, and Processes: Which sources and processes are most important to understand and quantify?

- Which sources, pathways and processes contribute most to observed levels of methylmercury in fish?
  - What are the loads from tributaries to the Delta (measured at the point where tributaries cross the boundary of the legal Delta)?
  - How do internal sources and processes influence methylmercury levels in fish in the Delta?
  - How do currently uncontrollable sources (e.g., atmospheric deposition, both as direct deposition to Delta surface waters and as a contribution to nonpoint runoff) influence methylmercury levels in fish in the Delta?

Forecasting Water Quality Under Different Management Scenarios

- What will be the effects of in-progress and planned source controls, restoration projects, and water management changes on ambient methylmercury concentrations in fish in the Delta?

Toxicity / Current Use Pesticides

In the context of the RMP, toxicity monitoring should be viewed primarily as a set of tools to help identify contaminants that are causing significant aquatic toxicity in the Delta. Because toxicity testing is an integrative tool, it can determine effects of multiple constituents concurrently, and can be more cost-effective than chemical analysis of individual constituents.

The linkage of pesticides to toxicity that is evident in the assessment questions below does not indicate a presumption that pesticides are the sole cause of toxicity in the Delta. Rather, this linkage is a reflection of the Steering Committee's acknowledgement that some pesticides cause ~~are significant causes of~~ aquatic toxicity ~~in the Delta~~, and that an early focus on pesticides may be a useful starting point for teasing out the overall picture of toxicity. Because pesticide regulatory mechanisms are already

established in statute, management actions can be readily implemented for pesticides if they are determined to be the cause of toxicity. If other toxicants are determined to contribute more to toxicity than expected, alternate priority constituents will be proposed to the Steering Committee for consideration.

The assessment questions that follow could be addressed with an adaptive approach that combines:

- Toxicity testing with organisms selected based on best information about likely sources of toxicity
- Toxicity resolution tools (e.g., toxicity identification evaluations, biomarkers) to identify classes of chemicals primarily responsible for toxicity signal(s)
- Targeted chemical analyses to better identify likely constituents responsible for toxicity signal
- Information on pesticide use patterns, and physical, chemical, and toxicological characteristics
- Information on pesticide fate and transport

Status and Trends: Is there a problem or are there signs of a problem?

- What are the spatial and temporal extents of lethal and sublethal aquatic toxicity (e.g., mortality, growth, reproduction, biomarkers) observed in the Delta?
  - Which toxic effect(s) should be the focus of management?

- To what extent do current use pesticides contribute to the observed toxicity in the Delta?
  - Which pesticides have the highest potential to be causing toxicity in the Delta and therefore should be the priority of management?
  - Do other contaminants (e.g., legacy pesticides, CECs, metals) contribute significantly to toxicity in Delta waters?

- What are the spatial/temporal distributions of concentrations of currently registered pesticides identified as likely causes of observed toxicity?

Sources, Pathways, Loadings, and Processes: Which sources and processes are most important to understand and quantify?

- What are the principal sources of the pesticides principally responsible for aquatic toxicity observed in the Delta?
- What are the spatial/temporal use patterns of priority pesticides?
- What are the fates of priority pesticides in the environment?
  - Do physical/chemical properties of priority pesticides and ambient conditions influence the degree of toxicity observed?

Forecasting Water Quality Under Different Management Scenarios

- How do ambient priority pesticide concentrations respond to different management scenarios?
- What current use pesticide loads can the Delta assimilate without impairment of beneficial uses?
- What is the likelihood that the Delta will be impaired in the future by current use pesticides?

Nutrients

Status and Trends: Are trends similar or different across subregions of the Delta?

- What are ambient levels of nutrients and nutrient-associated parameters (e.g., algal concentrations and species; dissolved oxygen fluctuations) in Delta subareas?
- What is the status of ecosystem conditions influenced by optimal nutrient levels?

Sources, Pathways, Loadings, and Processes: Which sources and processes are most important to understand and quantify?

- Which sources, pathways and processes contribute most to observed levels of nutrients?

- How have nutrient or nutrient-related source controls and water management actions changed ambient levels of nutrients and nutrient-associated parameters?
- What are the loads from tributaries to the Delta? ~~(measured at the point where tributaries cross the boundary of the legal Delta)?~~
- What role do internal sources play in influencing observed nutrient levels?
- Which factors in the Delta influence the effects of nutrients (e.g., flow rates, shading, salinity)?

Effectiveness Tracking: Are water quality conditions improving as a result of management actions such that beneficial uses will be met?

- How are eutrophication and its associated effects (e.g., dissolved oxygen fluctuations, algal concentrations and species, altered aquatic food webs) in Delta subareas improving as a result of nutrient source controls, such that beneficial uses are being met?

Forecasting Water Quality Under Different Management Scenarios

- How will ambient water quality conditions respond to potential or planned future source control actions, restoration projects, and water resource management changes?

Pathogens (Cryptosporidium/Giardia lamblia)

The assessment questions for pathogens could be addressed in a shorter-term special study with some combination of:

- Coordination of existing monitoring, assessment, and modeling efforts
- Ambient sample collection
- Source tracking using genetic markers
- Infectiousness studies
- Fate and transport models

This special study is to be coordinated with LT2 sampling in 2015 at drinking water intakes.

Status and Trends: Are trends similar or different across subregions of the Delta?

- Are current pathogen levels supportive of the municipal drinking water quality beneficial use as described in the Basin Plan?

Sources, Pathways, Loadings, and Processes: Which sources and processes are most important to understand and quantify?

- Can any changes in bin level[1] be attributed to an identifiable event, condition, or changes in a source?
- What is the influence of sources (agriculture, POTWs, urban runoff, upstream tributary, natural, recreation, and other) on pathogen levels at drinking water intakes?
- What is the viability and infectiousness of pathogens at drinking water intakes?
- What are the factors affecting decay and growth rates and can they be quantified and characterized for the purpose of modeling?

Forecasting Water Quality Under Different Management Scenarios

- What is the effect of source controls on pathogen levels at drinking water intakes?

[1] EPA has developed the Long Term 2 Enhanced Surface Water Treatment Rule (LT2 rule), which classifies filtered water systems into one of four treatment categories (bins) based on their monitoring results for *Cryptosporidium*. Most systems are expected to be classified in the lowest bin and will face no additional requirements. Systems classified in higher bins must provide additional water treatment to further reduce *Cryptosporidium* levels by 90 to 99.7 percent (1.0 to 2.5-log), depending on the bin. From: Rule Fact Sheet - Long Term 2 Enhanced Surface Water Treatment Rule (USEPA 2005).

- How will proposed restoration projects, water operations, and future urban growth affect municipal drinking water intake bin levels?
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Delta Regional Monitoring Program (RMP)

Technical Advisory Committee (TAC) Meeting

February 5, 2014

1:00 – 4:00 PM

Sacramento Regional County Sanitation District Building

Sunset Maple Room

10060 Goethe Road, Sacramento, CA 95827

Draft Summary

Attendees:

Voting TAC (and/or Alternate) members present[1]*:*

Stephanie Fong, Water Supply (State and Federal Contractors Water Agency [SFCWA])
Brian Laurenson, Stormwater – Phase I Communities (Larry Walker Associates [LWA]/Sacramento Stormwater Quality Partnership [SSQP])
Meghan Sullivan, Regulatory – State (Central Valley Regional Water Quality Control Board [Regional Board])
Joe Domagalski, TAC co-Chair (U.S. Geological Survey [USGS])
Vyomini Upadhyay, Publicly Owned Treatment Works (POTWs) (Sacramento Regional County Sanitation District [SRCSD])
Karen Ashby, Stormwater – Phase II Communities (LWA/City of Stockton)
Claus Suverkropp, Agriculture (LWA/Sacramento Valley Water Quality Coalition [SVWQC], San Joaquin & Delta Water Quality Coalition [SJDWQC])
Stephen McCord, TAC co-Chair (McCord Environmental, Inc. [MEI])
Timothy Mussen, POTWs (SRCSD)
Debra Denton, Regulatory – Federal (U.S. Environmental Protection Agency [USEPA])
Erwin van Nieuwenhuyse, Coordinated Monitoring (U.S. Bureau of Reclamation [Reclamation])
By phone:
Tony Pirondini, POTWs (City of Vacaville)

Others present:

Thomas Jabusch, San Francisco Estuary Institute-Aquatic Science Center (SFEI-ASC)
Jay Davis, SFEI-ASC
Shaun Philippart, California Department of Water Resources (DWR)/Interagency Ecological Program (IEP) Environmental Monitoring Program (EMP)

[1] *Name, Representation (Affiliation)*

Tony Hale, SFEI-ASC
Cristina Grosso, SFEI-ASC
On phone:
Valentina Cabrera-Stagno, USEPA
Stephen Clark, Pacific EcoRisk
Rachel Kubiak, Western Plant Health Association (WPHA)

1.	**Introductions** A quorum was established.
2.	**Approval of Agenda** Participants agreed on the meeting goals, outlined by Stephen McCord as: 1) get to know fellow TAC members, 2) review & comment on key documents, 3) understand TAC roles & responsibilities, 4) review & revise organizational tools, and 5) track action items.
3.	**Announcements from Committee Members** • SFCWA is in the process of passing its budget and coming out with a Request for Proposals (RFP) in a few weeks for an estimated total amount of $1,000,000. One of the possible topics is nutrients and the foodweb in Cache Slough (Stephanie Fong). • USGS might receive funding for additional drought-related monitoring in the Delta (Joe Domagalski). • SFEI-ASC is looking for a new Director. The search is in progress and there is an aggressive timeline. Potential candidates can obtain details from the SFEI website (Jay Davis).
4.	**Review Foundational Information** *RMP organizational structure:* TAC organizers include the co-Chairs (Joe Domagalski and Stephen McCord) and planning staff (Thomas Jabusch and Meghan Sullivan). SFEI-ASC will be responsible for producing materials for the TAC with guidance by the TAC. *TAC setup:* Participants asked questions about the composition of the TAC, e.g the need for three participants representing POTWs. Stephen explained the TAC setup: 1. Composition: 1 TAC member per SC seat 2. Subgroups: As needed; use existing groups to the extent possible 3. Funding: in-kind (except Stephen, who is partially supported through a contract with the Sacramento Stormwater Quality Partnership to serve as one of the TAC co-Chairs) 4. Term on TAC: 2 years; renewable 5. Formality: "voting" outcomes (majority vote based on quorum) serve to inform the SC but are not binding; all meetings are open to the public.

	Voting: Several participants asked questions about the voting process. Jay Davis commented that he hopes the group can work similarly to the Bay RMP, in which decisions are consensus-based and the consensus process is informal. There is very rarely no consensus, which would be a good thing to shoot for. Additionally, the TAC can recommend multiple approaches to the SC with reasoning behind each approach, as the SC ultimately has the final decision. Initial assignments for TAC laid out by the SC included: • Refine assessment questions (Feb-Mar) • ID & review conceptual models (Feb-Mar) • Assess critical monitoring needs (Feb-Apr) • Identify coordination efficiencies (Mar-May) • Design & cost monitoring program (Apr-Jun) • Funding needs & collaboration opportunities (Jul-Aug) *Informational items from SC Meeting:* The Delta Conservancy has submitted a proposal for a Delta Regional Data Center (RDC). SFCWA proposed for consideration by the SC to provide Delta RMP data visualization on the Estuary Portal as a potential in-kind contribution to the RMP. *Proposed date for the next SC meeting*: currently March 4. One of the main purposes of the next SC meeting would be to check in on progress with the TAC and its subgroups. The TAC agreed that it needs more time to work on the initial assignments for the technical subgroups.
5.	**Organization and Coordination of Technical Subgroups** The current plan is that there would be an initial set of subgroups working on the initial four program priorities: methylmercury, nutrients, pathogens (Cryptosporidium/Giardia) and pesticides/toxicity. A fifth technical subgroup consisting of dischargers and Regional Board staff is currently developing the design for an ambient background characterization. Stephen McCord suggested that one of the initial steps should be to identify existing groups to cooperate with, since it might be advantageous to create efficiencies and benefit from ongoing processes Participants agreed that it would be good if TAC members lead the various

	subgroups. They also agreed that there should be an open discussion about how to avoid conflicts of interest. Claus Suverkropp suggested that it would be good to disclose if TAC members are going to bid on work resulting from the RMP. Jay Davis pointed out that it would be good to have the brainpower of consultants in the process, but that for example, in the Bay RMP, when it is time for a decision, consultants are not present and the recommendations are formulated through discussions of stakeholders and external peer reviewers. External peer review is a valuable mechanism for avoiding problems associated with conflicts of interest. Some participants suggested that the Delta RMP structure already has some checks and balances built in. For example, the SC consists of representatives only without any consultants. Tim Mussen asked whether inviting experts would be part of the process of forming the subgroups. Stephen suggested leaving it up to the leads for the respective groups to decide on whom to invite to participate. Debra Denton suggested the State of California's Stream Pollution Trends (SpoT) monitoring program as a good model, where a scientific advisory team provides external review (e.g. it includes Michelle Hornberger from the USGS). *Process:* There was agreement that technical subgroups should be formed and that they would start out more efficiently if the TAC would provide them with some more direction. However, the group could not agree on a timeline for forming the subgroups, because some participants thought that the TAC would need more time to develop more specific guidance for the subgroups and others thought that forming the subgroups now would provide more diverse expertise, which would allow the TAC to make progress faster. Debra Denton suggested that the TAC would need to be more organized before initiating work in the subgroups. *Ambient background characterization:* Linda Dorn is the lead for coordinating the ambient background characterization effort, which is identifying locations where the RMP will need to monitor to replace some of the existing monitoring efforts by individual permittees. Responding to a question about the status of this effort, Meghan Sullivan added that Linda would be sending an email with the latest round of comments to Regional Board staff for review. Stephen added that the review being coordinated by Linda Dorn is built on the idea of understanding and building on the existing NPDES compliance monitoring. Debra Denton asked which permittees would be participating in the RMP. Meghan responded that the scope of the Regional Board Resolution generally extends to all permittees within the legal boundary of the Delta. Permit changes initially apply to POTWS and Phase I

	stormwater permittees. Regional Board staff are also planning to initiate discussions about the timeline for including Phase II permits. *Pesticides/toxicity:* There was an extended discussion on the merging of pesticides and toxicity as a combined priority topic. Thomas Jabusch explained that combining the two issues was a decision by the Steering Committee (SC), because management of current use pesticides is a priority concern, since these compounds are the source of most of the observed toxicity in the Delta. Tony Pirondini added that there had already been lots of discussion on this issue by the SC. Several participants recommended dropping the toxicity part from the pesticides priority and maintain the understanding that toxicity can be used as a tool for all constituents.
6.	**Review RMP Assessment Questions** Participants engaged in a discussion about how the assessment questions should be prioritized. Some participants argued that it would make sense to prioritize among the questions provided by the SC before starting on the technical work, saying that it would be more cost-effective. Debra Denton suggested that the TAC would need to talk about a framework for prioritizing the assessment questions to tackle. A number of technical questions were asked, which resulted in the idea to provide TAC and subgroups members with an information package (to include the information sheets prepared by the planning team) to review as a common starting point. The information sheets are working documents and open to edits. Several participants recommended focusing the review and edits on knowledge gaps. Karen Ashby pointed to the question about subregions and advised to share any information about subregions that are especially significant for any issue. <u>Outcomes:</u> - In reviewing the assessment questions, consider these common interests: ▪ Focus initially on status and trends interests ▪ Use an existing prioritization framework such as the one developed by DPR (example for pesticides could be based on usage, toxicity, and chemical properties) ▪ Start with water quality ▪ Use targeted monitoring stations (rather than a probabilistic design) ▪ Focus on answering questions to support making decisions - Materials to include in information package: ▪ Information sheets for methylmercury, nutrients, pathogens, pesticides, and toxicity

	▪ Maps of Delta monitoring stations and brief summary of monitoring directory and other related resources (e.g., estuaries portal for the CWQMC) ▪ USGS factsheet describing streamflow (discharge) monitoring stations in the Delta ▪ TAC member contact information
7.	**Communication Tools** Thomas Jabusch, Tony Hale, and Cristina Grosso described and demonstrated a Google website that SFEI-ASC has developed as a project-tracking tool for Habitat Restoration Project Tracking, a multi-agency project conducted by the Delta Conservancy, Central Valley Joint Ventures, SF Bay Joint Ventures, and SFEI-ASC. Participants agreed that such a tool would be useful for the Delta RMP TAC. <u>Outcomes:</u> ▪ SFEI-ASC will develop and maintain a similar tool for the Delta RMP using the Habitat Restoration Project Tracking website as a "template". The planning team will work with SFEI staff to develop the first draft of the website.
8.	**Wrap-up** The proposed timeline and next steps were discussed. Several TAC members expressed concerns about the proposed schedule, which is to have a fairly well designed monitoring program by the end of summer and start monitoring at the beginning of the next water year, as being ambitious. Brian Laurenson suggested that the timing would be dependent on how well the subgroups come together and their ability to execute the initial assignment. This in turn would depend on the leadership of the various subcommittees. It was agreed that the TAC would meet again late February/early March to develop more focused guidance to the TAC subgroups.
9.	**Next meeting** The next meeting will be on March 5, 2014 (1-4 pm).
9.	**Action items:** 9.1. Send out doodle poll for next meeting and schedule it (Thomas Jabusch, by February 14) 9.2. Distribute TAC member contacts table to TAC members (Meghan Sullivan, by February 19)

	9.3. Distribute information sheets to TAC (Thomas, by February 19) 9.4. TAC members to identify alternates (by March 5) 9.5. Review and update information sheets (TAC members, by March 5) 9.6. Subgroup leads to take responsibility for compiling contacts (Stephen will distribute current tables), plan to meet in March after next TAC meeting (by March 5) 9.7. Thomas to work with SFEI IT staff to set up TAC private & public web sites (Thomas, by March 5 for TAC review) 9.8. Send out maps of Delta monitoring stations and brief summary of monitoring directory and other related resources (Thomas, by February 19) 9.9. Distribute discharger and sensor station GIS and map (Joe Domagalski, by February 19)

Current ASC contract	**Develop Regional Monitoring and Assessment Framework**			
	Deliverables/Milestones	*Decisions*	*Summary*	*Timeline*
	Revised draft framework document representing an organizational structure	Guiding management questions	Approved by SC on February 27	March 2013 - complete
		Monitoring objectives (Year 1)	⇨ Monitoring objectives (assessment questions): to be refined by TAC, pending TAC subgroup formation (planned by ?), then to be vetted by SC	June 2014
		Indicators	⇨ Indicators: specific indicators to be targeted by monitoring/special studies (i.e., specific pesticides, toxicity, etc.)	June 2014
		Monitoring Design => *Monitoring locations*	⇨ Monitoring design: identify the most appropriate monitoring design/special study (or studies) is/are most appropriate (e.g., status and trends, process-based, source tracking)	June 2014
			⇨ Monitoring locations: sampling draw; evaluate feasibility of sampling, and opportunities for logistic coordination (e.g. piggybacking onto IEP or SWAMP sampling etc.)	June 2014
		Potential special studies	see Monitoring design above	June 2014
		Anticipated organizational budget	Costing will go hand-in-hand with developing the monitoring plan	June 2014
	Final framework document		Approved by SC and reviewed by RB management team	June 2014

Formal Agreement to implement Regional Monitoring and Assessment Framework

Deliverables/Milestones	*Decisions*	*Summary*	*Timeline*
	Participants Coordinating entity	Participants of Year 1 confirmed ASC funded and reconfirmed; new contract pending	April 2014 September 2013 - complete
Final Agreement		Formal agreements with confirmed partners for Year 1; aim to draft agreements for long-term implementation	September 2014

Implement the Delta RMP and Regional Monitoring & Assessment Framework

Deliverables/Milestones	*Decisions*	*Summary*	*Timeline*
	Funding sources/allocation	Existing and pending ASC contracts include funding for implementation tasks; are additional/other sources of funding available?	August 2014
		ASC (funded) to coordinate the implementation of Year 1	January 2015 onwards

Pulse of the Delta

Deliverables/Milestones	*Decisions*	*Summary*	*Timeline*
		ASC contract includes provisional $30K for producing a Pulse of the Delta. Additional funding will be required for producing the document	2015/16

Long-term implementation	The current ASC contract ends by March 2015. A new 2-year contract is anticipated to be in place by April 2014.		
	Decisions to be made by 2016	*Summary*	*Timeline*
	Reporting	⇨ Production of the Pulse of the Delta will require additional funding. Previous editions have been produced in pdf and print format. In addition or alternatively, interactive web-based viewing methods could be developed and made public via the Estuary Portal. *-> Decision-basis? Supporting information and technical materials needed?*	By March 2016
	Independent Science Review	⇨ Independent Science Review: who's reviewing what when? This will probably be a combination of 30K ft level review by the ISB or a similar body, a Technical Advisory/Review Committee, technical workgroups, and Science/Technical Advisory Groups/Boards convened for specific tasks, projects, or strategic purposes. These decisions would go alongside with decisions on the program planning cycle. The following table describes a proposed planning cycle. *-> Decision-basis? Supporting information and technical materials needed?*	
	Long-term funding arrangements	⇨ Need to be formalized, along with the program's funding mechanism(s). We have previously prepared a strawman laying out options. *-> Decision-basis? Supporting information and technical materials needed?*	
	Implementation (who's doing what?)	⇨ Implementation: who will coordinate the monitoring? Manage the data? Analyze and assess the data? Report and disseminate the results? *-> Decision-basis? Supporting information and technical materials needed?*	
	Overall coordination	⇨ Overall coordination? Who will be the long-term lead? The lead agency will also be responsible for integration/coordination of the Delta RMP with other efforts *-> Decision-basis? Supporting information and technical materials needed?*	

Potential IEP RMP Interaction Major Steps

1. RMP Technical Advisory Committee (TAC) prepares white papers on issues.
    - In some ways, the TAC is similar to an IEP Project Work Team (PWT). PWTs are created as needed to explore specific topics and recommend further research or studies. These teams are open to the public and include scientists, managers, and policy makers from IEP member agencies, universities, stakeholder groups, private companies, and interested members of the public;
2. RMP Steering Committee (SC) reaches consensus on issues to be pursued and frames problem statements.
    - In some ways, the RMP is similar to the IEP Coordinators (CT). CT is an interagency coordination team, reporting to the Directors, responsible for reviewing progress of IEP activities, recommending policy to the Directors, solving administrative problems, and coordinating resources between agencies.
3. TAC recommends refines problem statements and recommends study approaches.
4. SC approves/modifies problem statements and study approaches.
5. TAC develops draft hypothesis and study plans
6. TAC Chair coordinates with IEP Management Team (MT) on hypothesis and study plan:
    - *MT is a technical interagency team responsible for technical direction of monitoring and research, coordination of working level activities, analysis and synthesis of findings, report preparation and providing the Coordinators with recommendations including further studies and research*
    - *MT meets monthly – Agenda by Lead Scientist and Program Manager*
    - *This coordination help to improve efficiency, eliminate duplication, assure quality and foster integration of results through potential sharing of data, equipment, and personnel or participation of study principal investigators on study teams.*
7. TAC refines draft hypothesis and study plans with IEP Input
8. SC Approves hypothesis to be tested and study plans
9. TAC Chair coordinates approved study plan
    - Update MT and verify understandings and timing
10. RMP Staff arrange logistics
    - Arranges for any permits
    - Begin any contracts with P.I.s and IEP agencies, if needed
11. The MT develops an annual (Jan-Dec) work plan in late summer of each year
    - Includes summary of coordinated and/or directed studies that have MT input
    - If IEP agencies are part of implementation, then work plan elements include any tentatively agreed upon support.
12. MT presents the plan to the IEP Coordinators (CT) in late ~August.
13. CT approves coordination in ~Early September and recommends inclusion.
14. IEP Directors approve work plan with inclusions in ~mid-September to start January 1st.
15. IEP and investigators coordinate on implementation according to study plan.